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September 11, 1997

SEP 11 1997

VIA HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
Room 222
1919 M Street, NW
Washington, DC 20554

Re: RM No. 9147

Dear Mr. Caton:

On behalf of Diversified Communication Engineering, Inc. - Northpoint, please find enclosed an original and four copies of its Reply Comments in the above referenced proceeding.

Please contact the undersigned if you have any questions concerning this matter.

Very Truly Yours,



James F. Ireland

9/11/97 11:47
C14

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

SEP 11 1997

In the Matter of

Amendment of Parts 2.106 and 25.202 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the 10.7-12.7 GHz, 12.75-13.25 GHz, 13.75-14.5 GHz, and 17.3-17.8 GHz Bands, and to Establish Technical Rules Governing NGSO FSS Operations in these Bands

RM No. 9147

REPLY COMMENTS OF

DIVERSIFIED COMMUNICATION ENGINEERING, INC.--NORTHPOINT

Diversified Communication Engineering, Inc. ("DCE"), through counsel, submits these reply comments in opposition to the above captioned Petition for Rulemaking filed by SkyBridge LLC ("SkyBridge") on July 3, 1997. DCE will imminently commence the testing of patented technology, known as "Northpoint", under an FCC experimental license that will permit the sharing of spectrum in the 12.2.-12.7 GHz band by fixed terrestrial microwave transmitters. Although Northpoint promises far greater public interest benefits than the

SkyBridge proposal, the SkyBridge petition, if granted, would foreclose the terrestrial reuse of this spectrum not only for Northpoint but for all other potential users.

Northpoint will allow DBS subscribers to receive local broadcast television signals over **existing DBS reception equipment** without interference to the DBS service. This is an invaluable benefit to the DBS industry as it will overcome the industry's Achilles' heel (lack of access to local broadcast signals) without any additional investment in equipment by DBS subscribers. The SkyBridge proposal is mutually exclusive with Northpoint and must be denied to preserve terrestrially based services such as Northpoint. The public interest will be best served by promoting DBS as a full multichannel video competitor, and facilitating the delivery of local broadcast television to millions of DBS subscribers including rural consumers, many of whom have no other source of television service.

I. Background.

DCE is a Texas corporation that has developed a patented system ("Northpoint") for the reuse of Direct Broadcast Satellite spectrum in terrestrial applications without causing interference to either the DBS or terrestrial transmissions. Northpoint reuses DBS spectrum without interference through a combination of techniques including precise directionalization of the terrestrial signals relative to the look angle of DBS receivers in any particular market area.

The Northpoint technology was initially conceived as a solution to the technological and marketing dilemma of DBS operators who are unable to deliver local broadcast signals and are therefore at a competitive disadvantage to local cable operators. Through terrestrial reuse of DBS spectrum on a market by market basis, DBS operators will be able to deliver

the critical local broadcast signals through the same reception equipment and converter installed with the standard DBS package.¹ While the competitive benefits for DBS are enormous, Northpoint will also provide rural DBS subscribers, many of whom do not even have the alternative of subscribing to cable television, reliable and economical access to local broadcast signals through DBS. There is no reason that the Northpoint technology cannot be used in this same manner to reuse terrestrially any satellite signals (in any bands) transmitted from geostationary satellite systems.²

In November 1995, DCE filed an experimental license application with the FCC to empirically test the Northpoint system. The application, as subsequently amended in response to FCC comments, was granted on July 8, 1997. *See* WA2XMY, File No. 5020-EX-PL-95. The experiment is scheduled to commence imminently, and DCE is confident that the results of the experiment will provide concrete evidence that terrestrial reuse of DBS spectrum is compatible with DBS. Clearly, the public interest benefits of the Northpoint technology are substantial.

II. The SkyBridge Petition is Premature and Should Be Denied.

The limited record in this proceeding indicates a strong consensus that the reuse of spectrum serves the public interest to the extent that it can be accomplished without interference to existing services. The record also provides ample evidence that the SkyBridge

¹Indeed, just last week the DBS industry reiterated its long standing concern that many potential DBS subscribers do not take the service because local broadcast signals are not available. *See* Communications Daily at 2-3, September 8, 1997.

²In this regard, the Northpoint system is not limited to the delivery of television signals. A host of other wireless services such as data delivery are also possible.

proposal suffers from numerous technological and legal shortcomings that may not be resolvable. Moreover, as DCE establishes herein, assuming reuse can be accomplished, there are other more valuable uses of the spectrum than what SkyBridge proposes that must be fully evaluated before any decision to proceed with SkyBridge's proposal can be justified.

Virtually all commenters point out that SkyBridge's proposed spectrum sharing technique is untested and theoretical.³ This concern is heightened significantly because a number of important technical assumptions underlying SkyBridge's assertion that its system can operate without interfering with existing DBS and fixed microwave licensees are flawed.⁴ Moreover, as SkyBridge itself acknowledges, existing Region 2 and ITU regulations are incompatible with its proposed use of spectrum.³ In this regard, U.S. representatives to ITU WRC-97 will not support the modifications of ITU regulations that SkyBridge's proposal requires.⁴ Finally, Hughes Communications, Inc. points out that the SkyBridge proposal would seem as a practical matter to accommodate only a single licensee, SkyBridge itself, and

³See HBO Comments at 3; PanAmSat Comments at 2; Tempo Comments at 5-6; and USSB Comments at 2. In light of the nature of SkyBridge's proposal it is not apparent how the assumptions underlying its claims of noninterference to existing and future DBS systems and fixed microwave licensees could ever be reliably tested in advance of system deployment.

⁴See DirectTV Comments at 5-10; Harris Comments at 3; PanAmSat Comments at 2-3; and TIA Comments at 8-12.

³See SkyBridge Petition at 7-10, 13-16.

⁴See Communications Daily at 5, Aug. 11, 1997.

that it is not appropriate to expend the significant resources associated with a rulemaking for the benefit of a single party.³

In addition to the concerns summarized above, as previously noted, the SkyBridge proposal is mutually exclusive with the Northpoint system. In considering SkyBridge's rulemaking request the FCC must keep in mind that the Northpoint system will deliver the identical spectrum efficiency benefits that SkyBridge uses as justification for its proposal, but without many of the accompanying SkyBridge problems.

The Northpoint system by contrast to the SkyBridge proposal has many advantages.

- The Northpoint system is about to be tested to verify that the patented technology does operate on an interference free basis with DBS;
- Northpoint technology will allow the FCC to issue licences on a market by market basis thereby accommodating numerous licensees throughout the United States;⁴
- Northpoint promotes localism and complements DBS by delivering local broadcast signals over existing DBS reception facilities;⁵

³See Hughes Comments at 2.

⁴To the extent that mutually exclusive applications were filed to utilize the spectrum, the system will generate auction revenues for the U.S. Treasury.

⁵As noted previously, in rural areas where cable television is unavailable, Northpoint will allow for the reliable and economical delivery of local television stations as part of the DBS service.

- Northpoint does not face an array of international frequency allocation obstacles as it can be implemented in the United States first and then elsewhere as permitted by law; and
- Northpoint is consistent with Region 2 allocation requirements.⁶

Conclusion

Based upon the present record in this proceeding the SkyBridge Petition must be denied. Given the numerous advantages of the Northpoint system when compared to SkyBridge, even if the SkyBridge system could be implemented technically and legally, it would not provide the public interest benefits that the Northpoint system can deliver. In light of the fact that the SkyBridge proposal if granted would preclude the implementation of the Northpoint system the public interest would not be served by a grant of the SkyBridge proposal.

⁶ FCC Rule Section 2.106 provides that the 12.2-12.7 GHz band is available for "Fixed" service subject to Footnote 844. 47 C.F.R. §2.106. Footnote 844 provides:

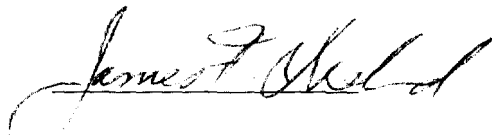
In region 2, in the band 12.2-12.7 GHz, existing and future terrestrial radio communication services shall not cause harmful interference to the space services operating in conformity with the Broadcasting-Satellite Plan for region 2 contained in Appendix 30 (Orb-85).

Northpoint is a "future terrestrial radio communication service that will not cause harmful interference" to DBS.

DCE would favor the initiation of a broader proceeding that would examine, *inter alia*, the benefits of frequency reuse utilizing the Northpoint system. Because the Northpoint system can be applied generically in bands used by geostationary satellites, it holds tremendous promise to maximize the benefits that the American public reaps from its scarce and valuable spectrum resource.

Respectfully submitted,

Diversified Communication Engineering, Inc.



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September 11, 1997

Its Attorney

CERTIFICATE OF SERVICE

I, Sandy E. Chiong, hereby certify that on this 11th day of September, 1997, a copy of the foregoing Reply Comments of Diversified Communication Engineering, Inc.--Northpoint was:

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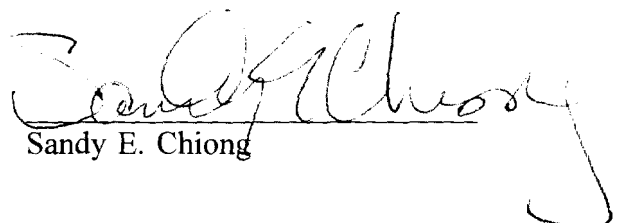
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